

WHAT IS CLAIMED IS:

1 1. A telecommunications platform comprising:
 2 a cluster of processors which collectively perform a platform processing
 3 function, plural processors of the cluster having Internet Protocol (IP) capabilities and
 4 respective plural IP interfaces;
 5 an Internet Protocol (IP) handler distributed throughout the cluster which
 6 facilitates applications executing on the plural processors comprising the cluster to be
 7 addressed using a same media access layer (MAC) address.

1 2. The apparatus of claim 1, wherein the Internet Protocol (IP) handler
 2 comprises a single IP stack which is addressed with the same media access layer (MAC)
 3 address.

1 3. The apparatus of claim 1, wherein the platform comprises an IP stack,
 2 wherein the Internet Protocol (IP) handler comprises a media access control (MAC)
 3 bridge; and wherein the MAC bridge comprises:
 4 a first bridge port connected by an ethernet link interface to the IP stack;
 5 a second bridge port provided by a first processor of the cluster;
 6 a third bridge port provided by a second processor of the cluster;
 7 a MAC bridge communications system connecting the first bridge port, the
 8 second bridge port, and the third bridge port to each other.

1 4. The apparatus of claim 3, wherein the MAC bridge communications system
 2 is one of a X.25 network, a TCP/IP network, and a cluster internal communications path
 3 which uses an Asynchronous Mode Transfer (ATM) technology.

1 5. The apparatus of claim 3, wherein each of the second bridge port and the third
 2 bridge port have a MAC/port table by which the ports can associate the MAC address of
 3 the IP stack with the first bridge port.

1 6. The apparatus of claim 5, wherein the Internet Protocol (IP) handler
 2 comprises:
 3 a router hosted by at least one of the processors of the cluster;

an interface interconnect which interconnects the plural IP interfaces to the router and passes IP frames incoming to the platform to the router regardless of which of the plural IP interfaces receives the frames; and
a socket.

7. The apparatus of claim 6, wherein the interface interconnect comprises:
an interface interconnect central part hosted by the at least one of the processors of the cluster that hosts the router; and
an interface interconnect distributed part hosted by the one of the processors of the cluster that executes the internet protocol (IP) software application.

8. The apparatus of claim 7, wherein the interface interconnect central part hosts the first bridge port and the second bridge port, and the interface interconnect distributed part hosts the third bridge port.

9. The apparatus of claim 3, wherein the second bridge port provided by a first processor of the cluster and the third bridge port provided by a second processor of the cluster are respectively connected to
a first local area network (LAN) and a second local area network (LAN).

10. The apparatus of claim 3, wherein the second bridge port provided by a first processor of the cluster and the third bridge port provided by a second processor of the cluster are connected to
a same local area network (LAN).

11. The apparatus of claim 1, whereby the plural processors have a same IP address, the Internet Protocol (IP) handler forwarding IP frames received from outside the platform on any of the plural IP interfaces and addressed to the same IP address to a correct one of the plural processors executing an IP software application.

12. A method of operating a telecommunications platform, the method comprising:
using a cluster of processors to perform collectively a platform processing function;

5 providing plural processors of the cluster with Internet Protocol (IP) capabilities
6 and respective plural IP interfaces;
7 using a same media access layer (MAC) address to address applications
8 executing on the plural processors comprising the cluster.

1 13. The method of claim 12, wherein the Internet Protocol (IP) handler
2 comprises a single IP stack, and further comprising addressing the single stack with the
3 same media access layer (MAC) address.

1 14. The method of claim 12, wherein the platform comprises an IP stack,
2 wherein the Internet Protocol (IP) handler comprises a media access control (MAC)
3 bridge; wherein the MAC bridge comprises a first bridge port connected by an ethernet
4 link interface to the IP stack; a second bridge port provided by a first processor of the
5 cluster; a third bridge port provided by a second processor of the cluster; and a MAC
6 bridge communications system connecting the first bridge port, the second bridge port,
7 and the third bridge port to each other; and wherein the method comprises forwarding,
8 over the LAN bridge communications system to the first bridge port, IP frames received
9 from outside the platform at the second bridge port and the third bridge port.

1 15. The method of claim 14, wherein the MAC bridge communications system
2 74 is one of a X.25 network, a TCP/IP network, and a cluster internal communications
3 path which uses an Asynchronous Mode Transfer (ATM) technology.

1 16. The method of claim 14, further comprising using a MAC/port table at each
2 of the second bridge port and the third bridge port to associate the MAC address of the
3 IP stack with the first bridge port.

1 17. The method of claim 12, further comprising:
2 using a same IP address for each of the plural processors of the cluster;
3 forwarding IP frames received from outside the platform on any of the plural IP
4 interfaces and addressed to the same IP address to a correct one of the plural processors
5 executing an IP software application.